

CLAIMS

What is claimed is:

1. A method of reducing the viability of a tumor cell, comprising administering to the tumor cell a virus, wherein said virus is not a common human pathogen and said tumor cell is a melanoma.
2. The method of claim 1, wherein the tumor cell has substantially no PKR activity.
3. The method of claim 1, wherein the tumor cell is PKR^{-/-}; STAT1^{-/-}; or both PKR^{-/-} and STAT1^{-/-}.
4. The method of claim 1, wherein the virus is a Rhabdovirus or a picornavirus.
5. The method of claim 4, wherein the virus is a Rhabdovirus.
6. The method of claim 5, wherein the Rhabdovirus is a vesicular stomatitis virus.
7. The method of claim 6, wherein the virus is unable to inactivate PKR activity within the tumor cell.
8. The method of claim 6, wherein the virus is an attenuated strain of vesicular stomatitis virus.

9. The method of claim 8, wherein the virus is vesicular stomatitis virus strain M1.
10. The method of claim 8, wherein the virus is vesicular stomatitis virus strain M2.
11. The method of claim 8, wherein the virus is vesicular stomatitis virus strain M3.
12. The method of claim 8, wherein the virus is vesicular stomatitis virus strain M4.
13. The method of claim 8, wherein the virus is vesicular stomatitis virus strain M5.
14. The method of claim 1, wherein the tumor cell is in a mammalian subject and the virus is administered to the tumor cell by intravenous, intranasal, intraperitoneal or intratumoral administration to the subject.
15. The method of claim 14, wherein the mammalian subject is a human or a non-human mammal.
16. The method of claim 14, wherein the virus is contained in cell line infected with the virus and the administration comprises administering the virus-infected cell line to the subject by a route selected from intratumorally, intravenously or intraperitoneally.

17. A method of reducing the viability of a tumor cell within a population of tumor cells and non-tumor cells comprising administering a vesicular stomatitis virus to the population of cells, wherein the tumor cells are melanoma cells and the virus is able to selectively infect and kill the tumor cell.

18. The method of claim 17, wherein the virus is unable to inactivate PKR activity in the tumor cell.

19. The method of claim 18, further comprising treating the population of cells with interferon prior to administering the virus.